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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/659,811	09/11/2003	Patrick N. Nelson	MS1-1540US	5257
22801	7590	05/22/2007		
LEE & HAYES PLLC 421 W RIVERSIDE AVENUE SUITE 500 SPOKANE, WA 99201			EXAMINER CHAU, COREY P	
			ART UNIT	PAPER NUMBER
			2615	
			NOTIFICATION DATE	DELIVERY MODE
			05/22/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

lhptoms@leehayes.com

Office Action Summary	Application No. 10/659,811	Applicant(s) NELSON, PATRICK N.	
	Examiner Corey P. Chau	Art Unit 2615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 March 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-7,9-14,16-22 and 24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-7,9-14,16-22 and 24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date: _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 3-7, 9-14, 16-22, and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by USPN 4939782 to Gambacurta, Jr. et al. (hereafter as Gambacurta).

3. Regarding Claim 1, Gambacurta discloses one or more computer readable media having stored thereon a plurality of instructions that, when executed by a computer (Figs. 1, 4, and 11; column 6, lines 1-10; column 8, lines 30-54), cause the computer to perform acts comprising:

in response to a user input to raise gain in one band of a multi-band computer implemented equalizer, computing a lower gain for at least one other band of the equalizer (Figs. 1, 4, and 11; column 4, lines 1-15; column 5, lines 41-68); and

implementing said lower gain for the at least one other band of the equalizer in the equalizer to output a signal with reduced distortion in the at least one other band of the equalizer (abstract; Figs. 1, 4, and 11; column 7, line 48 to column 8, line 29).

4. Regarding Claim 3, Gambacurta discloses said computing a lower gain comprises computing a lower gain for each of the other bands of the equalizer (abstract; Figs. 1, 4, and 11; column 7, line 48 to column 8, line 29).

5. Regarding Claim 4, Gambacurta discloses said computing a lower gain for each of the other bands of the equalizer comprises computing a lower gain approximately uniformly for each of the other bands of the equalizer (abstract; Figs. 1, 4, and 11; column 7, line 48 to column 8, line 29).

6. Regarding Claim 5, Gambacurta discloses said computing a lower gain for at least one other band of the equalizer comprises approximately uniformly lowering the gain in the other bands of the equalizer by approximately cumulatively the value of the raised gain in the one band (abstract; Figs. 1, 4, and 11; column 7, line 48 to column 8, line 29).

7. Regarding Claim 6, Gambacurta discloses said computing a lower gain for at least one other band of the equalizer comprises approximately uniformly lowering the gain in the other bands of the equalizer by approximately cumulatively a fraction of the value of the raised gain in the one band (abstract; Figs. 1, 4, and 11; column 7, line 48 to column 8, line 29).

8. Claim 7 is essentially similar to Claim 1 and is rejected for the reasons stated above apropos to Claim 1.

9. Claim 9 is essentially similar to Claim 3 and is rejected for the reasons stated above apropos to Claim 3.

10. Claim 10 is essentially similar to Claim 4 and is rejected for the reasons stated above apropos to Claim 4.

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11. Claim 11 is essentially similar to Claim 5 and is rejected for the reasons stated above apropos to Claim 5.

12. Claim 12 is essentially similar to Claim 6 and is rejected for the reasons stated above apropos to Claim 6.

13. Regarding Claim 13, Gambacurta discloses a method comprising:

in response to raising a gain in one band of a multi-band equalizer, calculating an approximately uniform lower gain in the other bands of the equalizer (abstract; Figs. 1, 4, and 11; column 4, lines 1-15; column 5, lines 41-68; column 7, line 48 to column 8, line 29); and

adjusting the gain of the equalizer in each band according to the raised gain in the one band, and the calculated gain in the other bands so that the equalizer output signal is not distorted (abstract; Figs. 1, 4, and 11; column 4, lines 1-15; column 5, lines 41-68; column 7, line 48 to column 8, line 29).

14. Regarding Claim 14, Gambacurta discloses providing the calculated gain of the other bands to the equalizer (abstract; Figs. 1, 4, and 11; column 4, lines 1-15; column 5, lines 41-68; column 7, line 48 to column 8, line 29).

15. Regarding Claim 16, Gambacurta discloses the calculating an approximately uniform lower gain in the other bands comprises approximately uniformly lowering the gain in the other bands by approximately cumulatively the value of the raised gain in the

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one band (abstract; Figs. 1, 4, and 11; column 4, lines 1-15; column 5, lines 41-68; column 7, line 48 to column 8, line 29).

16. Regarding Claim 17, Gambacurta discloses the calculating an approximately uniform lower gain in the other bands comprises approximately uniformly lowering the gain in the other bands by approximately cumulatively a fraction of the value of the raised gain in the one band (abstract; Figs. 1, 4, and 11; column 4, lines 1-15; column 5, lines 41-68; column 7, line 48 to column 8, line 29).

17. Regarding Claim 18, Gambacurta discloses an audio system comprising:

first means for determining a lower gain for at least one first band of a multi-band equalizer in response to a user input to raise gain in a second band of the equalizer (abstract; Figs. 1, 4, and 11; column 4, lines 1-15; column 5, lines 41-68; column 7, line 48 to column 8, line 29); and

second means for providing a user input to raise gain in a second band of the equalizer to said first means (abstract; Figs. 1, 4, and 11; column 4, lines 1-15; column 5, lines 41-68; column 7, line 48 to column 8, line 29); and

means for adjusting the gain of the equalizer in each band according to the raised gain in the second band, and the lowered gain in the first bands to adjust the equalizer output signal to prevent distortion (abstract; Figs. 1, 4, and 11; column 4, lines 1-15; column 5, lines 41-68; column 7, line 48 to column 8, line 29).

18. Regarding Claim 19, Gambacurta discloses said determining comprises determining the lower gain such that a lowering of gain in the first bands is approximately uniform for each of the first bands (abstract; Figs. 1, 4, and 11; column 4, lines 1-15; column 5, lines 41-68; column 7, line 48 to column 8, line 29).

19. Regarding Claim 20, Gambacurta discloses said determining comprises determining the lower gain in the first bands such that a cumulatively lower gain in the first bands is approximately the value of the raised gain in the second band (abstract; Figs. 1, 4, and 11; column 4, lines 1-15; column 5, lines 41-68; column 7, line 48 to column 8, line 29).

20. Regarding Claim 21, Gambacurta discloses said determining comprises determining the lower gain in the first bands such that a cumulatively lower gain in the first bands is approximately a fraction of the value of the raised gain in the second band (abstract; Figs. 1, 4, and 11; column 4, lines 1-15; column 5, lines 41-68; column 7, line 48 to column 8, line 29).

21. Regarding Claim 22, Gambacurta discloses means for providing the calculated gain in the first bands to the equalizer (abstract; Figs. 1, 4, and 11; column 4, lines 1-15; column 5, lines 41-68; column 7, line 48 to column 8, line 29).

22. All elements of Claim 24 are comprehended by Claim 18. Claim 24 is rejected for the reasons stated above apropos to Claim 18.

Response to Arguments

23. Applicant's arguments with respect to claims 1, 3-7, 9-14, 16-22, and 24 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

24. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

USPN 6999826 to Zhou et al. discloses an apparatus and method for improved PC audio quality.

USPN 7003120 to Smith et al. discloses a method of modifying harmonic content of a complex waveform.

USPAPN 20010022841 to Motojima et al. discloses a sound system.

USPN 5541866 to Sato et al. discloses a device for correcting frequency characteristic of sound field.

USPN 5617480 to Ballard et al. discloses a DSP based vehicle equalization design system.

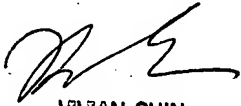
25. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Corey P. Chau whose telephone number is 571-272-7514. The examiner can normally be reached on Monday-Friday, 9:00am-6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian Chin can be reached on 571-272-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

May 14, 2007
CPC


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5/14/07